REMARKS

Upon receipt of this response, the Examiner is respectfully requested to contact the undersigned representative of the Applicant to arrange a telephone interview concerning the inventive merits of this application.

Claims 6-12 are rejected, under 35 U.S.C. § 102, as being anticipated by Fulmer et al. '196. The Applicant acknowledges and respectfully traverses the raised anticipatory rejection in view of the following remarks.

As previously noted, the present invention recognizes that a driver will normally stop a vehicle and hold the vehicle in a stationary state while the vehicle is stopped by depressing a brake pedal to activate the brake holding mode. The present invention also recognizes that the driver must release the brake pedal, before applying pressure to the gas pedal, in order to initiate movement of the vehicle and, that during the time interval when the driver is moving his or her foot from the brake pedal to the gas pedal, the vehicle may possibly roll in an wanted direction. The present invention prevents unwanted rolling of the vehicle, during the time period between releasing the brake pedal and depressing the gas pedal, by maintaining the braking mode in an active state *until* the clutch takes up control and commences movement of the vehicle.

Further, the present invention also recognizes that the driver may inadvertently release the brake pedal and possibly attempt to leave the vehicle while only the brake holding mode is activated *but without setting the parking brake*, for example. For this reason, the present invention provides a warning to the driver that the parking brake is not set by deactivating the holding mode, after a predetermined delay, which allows the vehicle to begin slowly rolling after the driver releases the brake pedal and in the event that the driver has not re-applied the brake and has not activated the clutch, during that time delay. Claims 6, 9 and 12 of the present invention are slightly revised to more clearly recite these features and each claim now includes the steps of activating the holding mode by activating a brake pedal and subsequently deactivating the holding mode upon either sufficient displacement of the clutch, which indicates an actual takeover torque of the clutch has occurred, or after a timing delay in the event that the brake pedal is released and not reactivated and the clutch does not provide an actual takeover torque to commence movement of the vehicle.

Turning now to the teachings of Fulmer et al. `196, this reference describes a vehicle hill holder system wherein a brake control system is responsive to a vehicle attitude sensor, that is, a hill sensor, the vehicle ignition, the vehicle speed and the direction, that is, whether the engine is on and the vehicle is stopped or in motion, a clutch pedal and a brake pedal. When the brake control system detects that the vehicle is stopped on a hill with the engine running and the clutch depressed, the control system will activate a brake booster to place the brake in the brake holding mode and to subsequently hold the brake in the brake holding mode if the driver subsequently releases the brake pedal. The brake booster then remains activated, and the brake in the brake holding mode, until the driver subsequently depresses the clutch pedal to activate the clutch so that the engine and transmission can assume the vehicle holding function. It is, therefore, apparent that there are a number of fundamental distinctions between the present invention and the teachings of Fulmer et al. `196.

For example, the Fulmer et al. `196 system deactivates the brake holding mode only upon activation of the clutch pedal, which means that the Fulmer et al. `196 system requires a manual transmission in order to have a clutch pedal. It must also be noted that the brake holding mode is deactivated *only upon activation of the clutch pedal rather than when the torque of the clutch actually takes up control of vehicle motion*, which means that there is a period of time during vehicle start-up when the vehicle may possibly roll undesirably before the transmission and the clutch assume control of the vehicle motion. That is, the system and the method of the present invention only deactivates the brake holding mode once the clutch provides torque and commence vehicle motion, rather than mere movement of the clutch pedal. The presently claimed invention thus deactivates the brake mode only once the clutch, and thus the transmission, has actually assumed the load of the vehicle so that, in complete contrast from the Fulmer et al. `196 system, there is no interval between the release of the brake and the assumption of vehicle control by the clutch and the transmission.

Moreover, the presently claimed invention does not depend upon or require, in any way, activation of a clutch pedal and is thus usable with an automatic clutch or some other starting element while, as discussed above, the Fulmer et al. `196 system is only usable with a manual clutch for a manual shift transmission.

In still further fundamental distinction between the present invention and the Fulmer et al. `196 system, once the brake booster of the Fulmer et al. `196 system is activated

by the brake pedal, the brake booster remains activated, holding the brake in the brake holding mode, until the driver subsequently depresses the clutch pedal. As a consequence, it is quite possible for the driver release the brake pedal after the brake booster is activated, or even to possibly get out of the vehicle and leave the vehicle unattended, with the brake booster solely holding the vehicle in the braked mode and thus, if the brake system or brake booster should fail or slip in some manner, the vehicle would then be free to roll. It must be noted that this very hazardous condition is built into the Fulmer et al. `196 system.

In fundamental contrast from the Fulmer et al. `196 system, and as described above and as recited in the amended claims, the present invention is designed such that the holding mode will be automatically deactivated after a predetermined time delay (1) if the brake pedal is release and not reactivated and (2) if the clutch is not sufficiently activated to take up the load. As described, this time delay is sufficient to aid the driver in releasing the brake and commencing movement of the vehicle, but short enough so that the driver cannot, for example, inadvertently exit the vehicle whereby the brake mode is solely braking the vehicle. More specifically, the present invention deactivates the brake holding mode in time to warn the driver that the parking brake, for example, is not set by allowing the vehicle to start slowly rolling, after expiration of the time delay, in the event that the brake pedal is not reactivated and the clutch does not to take up the load. The operation of the present invention is, therefore, not only completely unconsidered by Fulmer et al. `196, but is, in fact, directly contrary to the specific teachings of Fulmer et al. `196.

The Applicant, therefore, respectfully submits that Fulmer et al. `196 does not in any way teach, suggest or disclose the present invention, as recited in independent claims 6, 9 and 12, and thereby in dependent claims 7, 8, 10 and 11, under the requirements and provisions of 35 U.S.C. § 102 and/or § 103. Accordingly, independent claims 6, 9 and 12, as well as dependent claims 7, 8, 10 and 11, are thereby completely and patentably distinguished over and from Fulmer et al. `196. The Applicant, therefore, respectfully requests that the Examiner reconsider and withdraw all rejections of claims 6-11, over the cited prior art, and allow claims 6-11 as presented herein.

If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised rejection(s) should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejection(s) or applicability of the Fulmer et al. '196 reference, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,

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